

Mr. J. Gordon Hurst
Southern Indiana Gas and Electric Company
P. O. Box 3606
Evansville, Indiana 47735-3606

Re: 173-12521-00001
Operation Permit Revision to
OP 87-01-90-0093 and
Exemption from Pre-Construction Approval

Dear Mr. Hurst:

Southern Indiana Gas and Electric Company (SIGECO) was issued Operation Permit 87-01-90-0093 on March 18, 1986, for the F B. Culley Station Unit No. 2 boiler, located at County Road 350 W and Old Highway 66, Yankeetown, Indiana. On June 23, 2000, SIGECO requested approval to conduct maintenance activities on Culley Unit 2 including replacement of the economizer, replacement of the process control system, replacement of the last row of turbine blades in the steam turbine, and a complete field rewind and replacement of the main lead for the turbine-generator.

SIGECO has certified that there will be no increase in the actual emissions from Unit 2 due to these replacement activities. Therefore, no source modification or other pre-construction review is applicable under state (326 IAC 2) or federal (40 CFR 52.21) rules. EPA has concurred with this determination for activities that do not increase emissions. However, pursuant to EPA policy as set forth in an undated memo from David Howekamp, Region IX EPA, to HEI Power Corp. Guam, regarding renovation or repair and operation of the existing Tanquisson Power Plant, and in the May 23, 2000, determination issued by Francis Lyons, Region V EPA, regarding the Detroit Edison dense pack turbine project, these changes do require additional record keeping requirements to demonstrate that the replacement activities did not result in a significant emissions increase. An operating permit revision is hereby approved pursuant to 326 IAC 2-6.1-6(d)(4) and 326 IAC 2-6.1-6(d)(12).

This revision consists of an updated version of the SO₂ limit in Condition 9 and the addition of Condition 10 to include requirements to demonstrate that emissions do not increase following the replacement activities, as follows:

9. Pursuant to 326 IAC 7-4-10 (Warrick County Sulfur Dioxide Emission Limitations), the SO₂ emissions from Culley Unit 2 shall comply with the sulfur dioxide emission limitation of 2.79 pounds per million Btu (lbs/MMBtu) as specified in 326 IAC 7-4-0(a)(1), or the alternative emission limitations of 0.0006 lb/MMBtu for Unit 1 and 4.40 lb/MMBtu for Unit 2, as specified in 326 IAC 7-4-10(a)(1)(B).

The averaging period over which the sulfur dioxide emission rate is determined shall be as allowed under the current rule.

11.
 - (a) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the Unit 2 maintenance activities were conducted as proposed in the application, and indicating the date that the unit resumed regular operation. The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
 - (b) Permittee shall maintain and submit to the IDEM, OAQ, information demonstrating that the project did not result in an increase in the annual emissions of any pollutant which is regulated under the Clean Air Act (CAA) [40 CFR 52.21; 326 IAC 2-1; 326 IAC 2-7-10.5]

The 1999 emissions reported for Culley Unit 2 are as follows:

CO	97.08 tons
NO _x	2,083.39 tons
PM-10	61.45 tons
PM	267.19 tons
SO ₂	3,134.40 tons
VOC	11.31 tons

- (c) This information shall be submitted on an annual basis for a period of five (5) years from the date Culley Unit 2 resumes regular operation following the completion of the maintenance activities.
- (d) This information shall include the following for Culley Unit 2:
 - (1) Annual fuel use;
 - (2) Hours of operation;
 - (3) Annual emissions for all criteria pollutants; and
 - (4) Data and results from the most recent stack test.
- (e) This information shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and shall be postmarked or delivered by other means no later than thirty (30) calendar days following the last day of the reporting period.

All other conditions of the operation permit shall remain unchanged and in effect. Please attach a copy of this revision to the front of the original permit. The revision to the operation permit will be incorporated into the pending Part 70 permit. This supercedes the version of 173-12521-00001 issued on February 8, 2001.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Vickie Cordell, OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (800) 451-6027, press 0 and ask for Vickie Cordell or extension (3-1782), or dial (317) 233-1782.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

vkC

cc: File - Warrick County
U.S. EPA, Region V
Warrick County Health Department
IDEM Southwest Regional Office
Air Compliance Section Inspector - Dan Hancock
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner
Title V file: SIGECO Culley, T173-6885-00001

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Revision to an Operating Permit

Source Background and Description

Source Name:	Southern Indiana Gas and Electric Company (SIGECO) F.B. Culley Station
Source Location:	County Road 350 W and Old Highway 66 Yankeetown, Indiana 47630
County:	Warrick
SIC Code:	4911
Operation Permit No.:	OP 87-01-90-0093
Operation Permit Issuance Date:	March 18, 1986
Permit Revision No.:	173-12521-00001
Permit Reviewer:	Vickie Cordell

SIGECO F. B. Culley Station is a stationary electric utility generating station. Culley Unit 2 is a pulverized coal-fired dry bottom boiler rated at 1,031 million Btus per hour (MMBtu/hr) heat input capacity, constructed in 1966. On June 23, 2000, SIGECO requested approval to conduct maintenance activities on Culley Unit 2 including replacement of the economizer, replacement of the process control system, replacement of the last row of turbine blades in the steam turbine, and a complete field rewind and replacement of the main lead for the turbine-generator.

SIGECO has certified that there will be no increase in either the maximum hourly emissions or the actual annual emissions from Unit 2 due to these replacement activities. Therefore, no source modification or other pre-construction review is applicable under state (326 IAC 2) or federal (40 CFR 52.21) rules. EPA has concurred with this determination for maintenance activities that do not increase emissions. However, according to EPA policy, these changes do require additional record keeping requirements to demonstrate that the replacement activities did not result in a significant emissions increase. An operating permit revision is hereby approved pursuant to 326 IAC 2-6.1-6(d)(4) and 326 IAC 2-6.1-6(d)(12) .

Existing Approvals

The source applied for a Part 70 Operating Permit on October 11, 1996; that permit has not been issued yet. The source has been operating under previous approvals including, but not limited to, the following:

- (a) Operation permits OP 87-01-90-0092, 87-01-90-0093, 87-01-90-0094, and 87-01-90-0093 issued March 18, 1986; and
- (b) Construction permit CP 173-2718, issued June 1, 1994, for installation of a flue gas desulfurization (FGD) system for Units 2 and 3.

Enforcement Issue

Culley Units 1, 2, and 3 are named in a Department of Justice (DOJ) lawsuit filed in November 1999 against SIGECO F.B. Culley Station. Unit 2 is specifically cited in the lawsuit for alleged violation of Prevention of Significant Deterioration (PSD) requirements when a new outlet section for the secondary superheater was installed in 1992 without obtaining a PSD permit. The lawsuit is pending.

Recommendation

The staff recommends to the Commissioner that the permit revision be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 23, 2000.

Emission Calculations

SIGECO has certified that there will be no increase in either the maximum hourly emissions or the actual annual emissions from Culley Unit 2 due to these replacement activities. Therefore, there are no emission calculations for this permit revision. A copy of the 1999 Emission Report for F.B. Culley Station is included as Appendix A. The emissions from Unit 2 are divided between the bypass stack and the FGD stack; these emissions were summed for the total emissions shown in new condition 11 in the permit mod. A copy of SIGECO's statement regarding the projected decrease in demand for Unit 2 is included as Appendix B.

Federal Rule Applicability

- (a) The planned replacement activities for Culley Unit 2 are not subject to Prevention of Significant Deterioration (PSD) review (326 IAC 2-2; 40 CFR 52.21).

In determining whether an activity triggers PSD, the Clean Air Act and EPA regulations specify a two-step test. The first step is to determine if the activity is a physical change or change in the method of operation. EPA has indicated in the pending DOJ lawsuits against numerous utilities and in guidance documents that some or all of the activities planned for Culley Unit 2 (replacement of the economizer, replacement of the process control system, replacement of the last row of turbine blades in the steam turbine, and a complete field rewind and replacement of the main lead for the turbine-generator) would not be considered routine maintenance due to the infrequency with which they are performed and/or the cost of the activities.

If it is indeed a change, the second step is to determine whether emissions will increase due to the change. As stated in the May 23, 2000, determination issued by Francis X. Lyons, Region V EPA, regarding the Detroit Edison dense pack turbine project "nonroutine changes of any type, purpose, or magnitude at an electric utility steam generating unit -- ranging from projects to increase production efficiency to even the complete replacement of entire major components -- are excluded from PSD coverage as long as they do not significantly increase emissions from the source". An undated memo from David Howekamp, EPA, to HEI Power Corp. Guam applies this approach to renovation or repair and operation of the existing Tanquisson Power Plant on Guam. A copy of this memo is included as Appendix C. Copies of electronic correspondence from IDEM OAQ to Sam Portanova of EPA Region V regarding this review and the responses received are included as Appendix D.

No determination has been made by OAQ at this time regarding whether or not any of the replacement activities planned for Culley Unit 2 constitute a physical change. SIGECO anticipates a slight decrease in the operation of Unit 2 due to lessening commitments to sell electricity to buyers outside of SIGECO's home customer base, and asserts that there will be no increase in actual annual emissions from Unit 2 due to these replacement activities. IDEM, OAQ, has no basis for disputing that assertion. Therefore no determination as to the routineness of the activities was necessary.

Annual submittals are required following the replacement activities to demonstrate for a five (5) year period that the activities did not result in a significant increase in emissions. A significant increase would be an increase that is subject to pre-construction review under federal (40 CFR 52.21) or state (326 IAC 2) rules, including state source modification provisions for Part 70 sources (326 IAC 2-7-10.5). When calculating post-change emissions, the source does not have to include that portion of the emissions that could have been accommodated before the change and is unrelated to the change, such as emissions attributable to increased utilization of the unit due to the growth in electrical demand for the utility system as a whole since the change.

- (b) This unit is not subject to the requirements of the New Source Performance Standard (NSPS), 326 IAC 12, (40 CFR 60.40) Subpart D, due to the original date of construction. Subpart D is applicable to boilers of more than 250 million Btu per hour that were constructed or modified after August 17, 1971. Culley Unit 2 was constructed in 1966 and has not undergone modification pursuant to 40 CFR 60.

The current project is not expected to make the unit subject to NSPS Subpart Da because it is not considered to be a physical modification pursuant to 40 CFR 60 provided there is no increase in the emission rate of a regulated pollutant due to the replacement activities. SIGECO asserts that there will be no increase in emission rates from Unit 2 due to these replacement activities. IDEM, OAQ, has no basis for disputing that assertion.

- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR 63) applicable to this unit.

This revision adds requirements to the current operation permit to demonstrate for a five (5) year period that there is no increase in emissions following this project.

State Rule Applicability

326 IAC 2-6.1-6(d)(12) (Permit Revisions)

Pursuant to 326 IAC 2-6.1-6(d)(12), the planned maintenance activities are not subject to State pre-construction review requirements because there will be no increase in annual emissions.

Permit Revision

Changes to prior permit conditions are shown below in bold and strikeout. New conditions are shown in bold. Condition 9 has been updated to the current requirements for Unit 2, and Condition 10 has been added to the current operation permit, as follows:

9. **Pursuant to 326 IAC 7-4-10 (Warrick County Sulfur Dioxide Emission Limitations), the SO₂ emissions from Culley Unit 2 shall comply with the sulfur dioxide emission limitation of 2.79 pounds per million Btu (lbs/MMBtu) as specified in 326 IAC 7-4-0(a)(1), or the alternative emission limitations of 0.0006 lb/MMBtu for Unit 1 and 4.40 lb/MMBtu for Unit2, as specified in 326 IAC 7-4-10(a)(1)(B).**

~~That as per the requirements of 325 IAC 7-1 the coal to be burned shall be such so as to limit the sulfur dioxide emissions to 6.0 pounds per million Btu's of energy until December 31, 1989, when sulfur dioxide emissions shall be limited to 5.48 pounds per million Btu's.~~

The averaging period over which the sulfur dioxide emission rate is determined shall be as allowed under the current rule.

11. (a) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the Unit 2 maintenance activities were conducted as proposed in the application, and indicating the date that the unit resumed regular operation. The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
- (b) The Permittee shall maintain and submit to the IDEM, OAQ, information demonstrating that the project did not result in an increase in the annual emissions of any pollutant which is regulated under the Clean Air Act (CAA) [40 CFR 52.21; 326 IAC 2-1; 3226 IAC 2-7-10.5]

The 1999 emissions reported for Culley Unit 2 are as follows:

CO	97.08 tons
NO _x	2,083.39 tons
PM-10	61.45 tons
PM	267.19 tons
SO ₂	3,134.40 tons
VOC	11.31 tons

- (c) This information shall be submitted on an annual basis for a period of five (5) years from the date Culley Unit 2 resumes regular operation following the completion of the maintenance activities.
- (d) This information shall include the following for Culley Unit 2:
- (1) Annual fuel use;
 - (2) Hours of operation;
 - (3) Annual emissions for all criteria pollutants; and
 - (4) Data and results from the most recent stack test.
- (e) This information shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and shall be postmarked or delivered by other means no later than thirty (30) calendar days following the last day of the reporting period.

Conclusion

The replacement activities for the Culley Unit 2 boiler and turbine-generator unit shall be subject to the conditions of the attached proposed permit revision 173-12521-00001.

Detailed Emission Unit Report for SIGECO - F.B.CULLEY GENERATING STATION

Plant ID: 173-00001

Reporting Year: 1999

Emission Unit 001 Description BOILER NO.1 STACK 1

Design 477

Max Nameplate

Quarterly Activity: Winter: 25 Spring: 28 Summer: 28 Autumn: 18

Operating Schedule: Hours/Day: 24 Days/Week: 7 Hours/Year: 687 Weeks/Year: 0

Pollutant	Reported Actual	Reported
CO	29.17	504.92
NO2	1,018.83	7,561.15
PM10	14.23	837.85
PT	61.86	3,642.83
SO2	3,155.54	3,166.38
VOC	3.39	20.05

Emission Unit 002 Description UNIT NO.2 BYPASS STACK

Design 1,031

Max Nameplate

Quarterly Activity: Winter: 25 Spring: 27 Summer: 29 Autumn: 19

Operating Schedule: Hours/Day: 24 Days/Week: 7 Hours/Year: 321 Weeks/Year: 0

Pollutant	Reported Actual	Reported
CO	3.90	11.52
NO2	83.28	171.59
PM10	2.46	194.82
PT	10.69	845.38
SO2	947.29	1,198.30
VOC	0.45	0.80

Emission Unit 003 Description UNIT 2 FGD 2/3 STACK

Design 1,031

Max Nameplate

Quarterly Activity: Winter: 25 Spring: 27 Summer: 29 Autumn: 19

Operating Schedule: Hours/Day: 24 Days/Week: 7 Hours/Year: 770 Weeks/Year: 0

Pollutant	Reported Actual	Reported
CO	93.18	631.79
NO2	2,000.11	14,258.47
PM10	58.99	10,419.82
PT	256.50	45,210.92
SO2	2,187.11	64,077.80
VOC	10.86	43.52

Emission Unit 004 Description UNIT 3 FGD 2/3 STACK

Design 2,689

Max Nameplate

Quarterly Activity: Winter: 30 Spring: 15 Summer: 29 Autumn: 26

Operating Schedule: Hours/Day: 24 Days/Week: 7 Hours/Year: 764 Weeks/Year: 0

Pollutant	Reported Actual	Reported
CO	245.68	901.08
NO2	5,270.45	20,397.43
PM10	172.94	15,643.90
PT	751.91	68,017.30
SO2	6,067.65	96,995.10
VOC	28.59	43.96

Emission Unit 005 Description COAL HANDLING & STORAGE

Design

Max Nameplate

Quarterly Activity: Winter: 25 Spring: 25 Summer: 25 Autumn: 25

Operating Schedule: Hours/Day: 24 Days/Week: 7 Hours/Year: 876 Weeks/Year: 0

Pollutant	Reported Actual	Reported
PM10	76.77	0.00
PT	362.30	0.00

Emission Unit 008 Description COAL YARD GAS TANK 1

Design 3

Max Nameplate

Quarterly Activity: Winter: 25 Spring: 25 Summer: 25 Autumn: 25

Operating Schedule: Hours/Day: 24 Days/Week: 7 Hours/Year: 876 Weeks/Year: 0

Pollutant	Reported Actual	Reported
VOC	0.01	0.00

Emission Unit 009 Description COAL YARD GAS TANK 2

Design 3

Max Nameplate

Quarterly Activity: Winter: 25 Spring: 25 Summer: 25 Autumn: 25

Operating Schedule: Hours/Day: 24 Days/Week: 7 Hours/Year: 876 Weeks/Year: 0

Pollutant	Reported Actual	Reported
VOC	0.01	0.00

Emission Unit	010	Description	EMERGENCY DIESEL FIREPUMP		
Design	500				
Max Nameplate					
Quarterly Activity:	Winter: 25	Spring: 25	Summer: 25	Autumn: 25	
Operating Schedule:	Hours/Day: 2	Days/Week: 1	Hours/Year: 104	Weeks/Year: 0	
		Pollutant	Reported Actual	Reported	
		CO	0.15	0.00	
		NO2	0.70	0.00	
		PM10	0.05	0.00	
		PT	0.05	0.00	
		SO2	0.05	0.00	
		VOC	0.05	0.00	

SIGECO F.B. Culley No. 2 Forecast Period				
Fuel heat input, 10 ⁹ Btu/yr,				
2000	2001	2002	2003	2004
6870.0	5857.0	6033.0	6318.0	6183.0

Projected values, as submitted by SIGECO September 19, 2000.

IN REPLY: AIR-3
REFER TO: NSR 2

Richard K. McQuain
Vice President
HEI Power Corp. Guam
P.O. Box 3160
Honolulu, HI 96802-3160

Dear Mr. McQuain:

This is in response to your request for a determination of the applicability of the Prevention of Significant Air Quality Deterioration (PSD) regulations (40 CFR 52.21) to your project on the island of Guam. The proposed project is the renovation/repair and operation of the existing Tanquisson Power Plant on Guam.

Our review of the information submitted indicates that pollutants are projected to be emitted in the amounts as listed below:

Pollutant	Project Emissions in tons/year		
	Baseline Emissions (1992 baseline year)	Representative Actual Annual Emissions	Max Net Emissions Increase
NO _x	1,508	1,508	0
SO ₂	3,354	2,194	-1,160
CO	72	72	0
PM-10	50	50	0

According to our analysis of the facility's historical emissions and the projected representative actual emissions after the renovation, the proposed project will not have a significant net emissions increase and, therefore, is not a "major modification" as defined in 40 CFR 52.21(b).

However, in order for the proposed project to be exempt from PSD, the operator must maintain and submit to the EPA (Attn: AIR-3) on an annual basis for a period of 5 years from the date the facility resumes regular operation, information demonstrating that the renovation did not result in a significant emissions increase. The required information must

-2-

include, at the minimum, records on annual fuel use, hours of operation and fuel sulfur content. When calculating emission increases, the operator does not have to include that portion of his emissions attributable to increased utilization at the unit due to the growth in electrical demand for the utility system as a whole since the baseline period (see 40 CFR 52.21(b)(33)(ii)).

Based on the information you have provided us in your submittal, the EPA has determined that this project is conditionally exempt from the requirements of the PSD regulations. This project will remain conditionally exempt for a period of 5 years from the date the facility resumes regular operation. Although exempt from PSD, the source is still subject to all applicable local air pollution rules and regulations. Also future construction, modification, or changes in operation procedures may require review by this office concerning any necessary permits if such actions are planned.

After the issuance of this letter, should the EPA determine that the project is a major modification and subject to PSD, then this source will have to immediately apply for a federal PSD permit. All requirements of the PSD regulations will have to be satisfied even though construction may be complete. In the event that vendor guaranteed emission rates are not achieved, it will still be the source's responsibility to comply with all PSD requirements. Failure to comply with the requirements of the PSD regulations or continued operation of such a source prior to receiving a final PSD permit may subject the source to federal enforcement action pursuant to Section 113 of the Clean Air Act.

If you have any questions regarding this matter, please contact Bob Baker of our Permits Office at (415) 744-1258.

Sincerely,

David P. Howekamp
Director
Air Division

cc: Guam EPA

TO: Sam Portanova, U.S. EPA Region V

FROM: Vickie Cordell, IDEM OAM Permits

RE: SIGECO Culley Station construction applications

SIGECO has submitted four construction permit applications for work to be conducted at the Culley Station located at Newburgh, in Warrick County. The applications are for:

1. Replacement of existing Honeywell Multi-Function controllers (over 20 years old) with Honeywells's High Performance Process Managers. The control system is for the Unit 2 boiler and associated turbine system. SIGECO anticipates that there will be a decrease in emissions due to efficiency gains associated with replacement of these components, such as heat rate improvement.
2. Replacement of existing Unit 2 economizer with "like-kind" replacement. The current economizer is the original component that was installed in 1966. The application states that the economizer will be replaced with an "identical" unit: identical materials of construction, dimensions, and number and configuration of tubes.
3. Complete field rewind and replacement of main lead for the Unit 2 turbine-generator. The proposed rewind will use the techniques of layer separation to resolve the problem of copper dust contamination, which commonly occurs in the multi-layer turn-design type of field winding present in Unit 2's rotor. Also, the main solid-ventilated leads are susceptible to inservice fatigue failures and will be replaced with components that have improved material properties and geometry which will reduce cyclic stress and failures.
4. Replacement of the last (18th) row of turbine blades in the Unit 2 turbine. The previous blades were removed during an earlier outage when they were unexpectedly found to be in poor condition. No replacements were on hand at that time, so operation was resumed without them. SIGECO is planning to use "like-kind" blades, not upgraded blades, in the hope that the turbine work will be viewed as routine maintenance.

SIGECO has presented arguments that the proposed activities do not fall under the jurisdiction of either the federal NSPS and major source PSD permitting programs, or the state minor new source review rules. They have submitted projected future emissions showing no increase in actual annual emissions after the proposed activities. In fact, the projected demand "growth" shows a slight decrease in annual emissions due to lessened load on the unit. SIGECO is planning to decrease the amount of electricity that it sells on contract to outside buyers. This will reserve more of its capacity for its base customers, in preparation for high-demand periods like the heat spell in the summer of 1999. They anticipate that this approach will result in lower level use of the unit most of the time, and a decrease in actual annual emissions. Therefore, SIGECO believes that none of these activities, or the sum of the activities, meets the definition of modification for NSPS or PSD.

SIGECO maintains that the plant has not been experiencing any increase in down time in the past five years due to increased service required by any of the aging components, and that none of the replacement activities will result in any increase in potential or actual hours of operation for the Unit 2 boiler. (Note: OAM has not researched records to confirm or dispute the claim regarding down time. If necessary, the records of component failure reported to the North American Electric Reliability Council's (NERC) Generating Availability Data System (GADS) could be reviewed.) Unit 2 has not been derated. SIGECO and a contractor hired to inspect the economizer have projected that the unit will continue to function at the current level until it fails completely. Rather than be faced with a long unscheduled outage, potentially during a peak demand time, SIGECO wants to replace the economizer now as a maintenance activity.

SIGECO believes that the proposed activities do not have any emissions impact and therefore do not need a synthetic minor limit to avoid PSD review. The attorney for SIGECO has pointed out that this also seems to be the view expressed in the recent Region V PSD applicability determination for the Detroit Edison Dense Pack turbine blade replacement project, in particular the Detroit Edison Applicability Determination: Detailed Analysis addendum of the interpretation, including: "A utility making a particular change, instead of accepting permit restrictions on the potential of the changed unit to emit a particular pollutant, may avoid PSD if its projections of 'representative actual annual emission' following the change is not significantly greater than its pre-change emissions, but only if the source 'maintains and submits to the Administrator [or relevant state permitting authority] on an annual basis for a period of 5 years from the date the unit resumes regular operation, information demonstrating that the physical or operation change did not result in an emissions increase.'" (page 19 of the Detailed Analysis).

However, this approach apparently may conflict with the November 1999 DOJ lawsuits regarding utility modifications. SIGECO Culley Units 1, 2, and 3 were included in this enforcement action. The action cites SIGECO for PSD and NSPS Subpart Da violations resulting from activities which include, but are not limited to, installation of a new economizer for Unit 1 in 1991, installation of a new outlet section for the secondary superheater for Unit 2 in 1992, replacement of the Unit 3 economizer bank in 1994, and replacing components of the secondary superheater outlet bank and reheater outlet bank and overhauling the Unit 3 turbine and generator in 1997. Statements from EPA have shown that these type of activities are considered to be life extension projects.

SIGECO split the planned projects into four applications in the hope that some of the activities might be granted an exemption even if some of the work, like the economizer replacement, is determined to be subject to PSD review. This brings me to the following questions:

1. Combining of applications:
Does Region V agree with OAM's preliminary determination that all of these projects should be reviewed together, or could the turbine maintenance be exempted from review and allowed to proceed during the boiler PSD review?
2. PSD and NSPS applicability:
Does Region V believe that this replacement work should trigger PSD review and NSPS Subpart Da applicability for Unit 2, even if future actual emissions do not exceed past actuals?

As detailed above, SIGECO believes that the anticipated decreased use of Unit 2 is sufficient to keep the Unit 2 work out of PSD and NSPS review. If Region V agrees that this is a possibility, should the projected level of use or emissions be made an enforceable condition despite the Detroit Edison determination?

3. DOJ lawsuit:
Do you know the current status of the Culley DOJ lawsuit? The lawsuit requests that SIGECO be ordered by the court to install the best available control technology on Units 1, 2 and 3 at Culley Station for each pollutant subject to regulation under the Clean Air Act.

I know that these utility questions are not exactly your area. Please forward this request as appropriate. I can be reached by email: Vcordell@dem.state.in.us or at 317-233-1782. Thanks for your help.

From: <Portanova.Sam@epamail.epa.gov>
To: VICKIE CORDELL <VCORDELL@dem.state.in.us>
Date: 1/4/01 2:31PM
Subject: SIGECO

Vickie, here is what one of our attorneys gave as an update to the DOJ case:

"The United States filed a civil action against SIGECO in federal district court in Indianapolis on November 1999, as part of EPA's coal-fired power plant enforcement initiative. The complaint and a subsequent amended complaint filed in January 2000 alleged that SIGECO had implemented physical changes at Culley Units 1, 2 and 3 which constituted major modifications subject to PSD permitting, and in one instance NSPS permitting, and therefore required installation of pollution control devices. For the past several months, the parties have engaged in extensive document discovery pursuant to a court-approved case management plan. Depositions will likely be scheduled shortly. Trial is scheduled for January 2002."

If you need any further information on the case, you should check with Reginald Pallesen at 312-886-0555

From: <Portanova.Sam@epamail.epa.gov>
To: <VCORDELL@dem.state.in.us>
Date: 1/10/01 2:05PM
Subject: Re: SIGECO Culley query

Vickie, the WEPCO rule allows all physical and operational changes at electric utility steam generating units to apply an actual-to-actual test to determine PSD applicability. This does not apply to brand new units or replacements to existing units.

So, in response to your question #2, PSD wouldn't be triggered if future-actual emissions do not exceed past-actual emissions. WEPCO allows this for all changes regardless of whether they are "like-kind". The projected future-actual emissions do not need to be made an enforceable condition. It seems to me that required the future-actual rate to be made enforceable in a permit would be pretty much the same as establishing a new future-potential rate (which any source can do to avoid PSD). However, the permit must require the source to submit for 5 years after the change sufficient records to determine if the change results in an increase in representative actual annual emissions.

Concerning question #1, I need to check with our power plant experts to see what we find acceptable as routine maintenance. I'll also need to check with our NSPS people to see how the WEPCO provisions are applied to NSPS.

Sam

VCORDELL@dem.state.in.us on 12/13/2000 03:33:23 PM

To: Sam Portanova/R5/USEPA/US@EPA
cc: DHANCOCK@dem.state.in.us, ICALILUN@dem.state.in.us,
MSIMS@dem.state.in.us, PDUBENET@dem.state.in.us
bcc:

Subject: SIGECO Culley query

Attached is a request for guidance on permitting of some major maintenance activities planned for SIGECO Culley.

CC: <DHANCOCK@dem.state.in.us>, <ICALILUN@dem.state.in.us>,
<MSIMS@dem.state.in.us>, <PDUBENET@dem.state.in.us>

From: <Portanova.Sam@epamail.epa.gov>
To: <VCORDELL@dem.state.in.us>
Date: 1/10/01 2:14PM
Subject: Re: SIGECO Culley query

Vickie,

Your memo says that SIGECO wants the turbine blade replacement to be considered routine maintenance. Are they asking for any of the other changes to be considered routine or is it just the turbine blades that are in question?

Sam

From: <Portanova.Sam@epamail.epa.gov>
To: <VCORDELL@dem.state.in.us>
Date: 1/10/01 2:39PM
Subject: one more question

... I have another question about the turbine blade replacement. You said that they were removed "during an earlier outage". How long ago was this outage? Also, what is the expected life-span of these turbine blades?